

§ 58.30-5

apply only to the accumulator and the system upstream of this point.

(11) Materials and/or personnel handling equipment systems, i.e. cranes, hydraulic elevators, etc., not approved by the Commandant as fail-safe as defined in paragraph (a)(2) of this section.

(12) Any fluid power or control system installed in the cargo area of pump rooms on a tank vessel, or in spaces in which cargo is handled on a liquefied flammable gas carrier.

(13) All pneumatic power and control systems having a maximum allowable working pressure in excess of 150 pounds per square inch.

(14) Any other hydraulic or pneumatic system on board that, in the judgment of the Commandant, constitutes a hazard to the seaworthiness of the ship or the safety of personnel either in normal operation or in case of failure.

(b) Other fluid power and control systems do not have to comply with the detailed requirements of this subpart but must meet the requirements of § 58.30-50.

[CGFR 68-82, 33 FR 18878, Dec. 18, 1968, as amended by CGD 73-254, 40 FR 40168, Sept. 2, 1975]

§ 58.30-5 Design requirements.

(a) The requirements of part 56 are also applicable to piping and fittings in fluid power and control systems listed in § 58.30-1 of this part, except as modified herein. The designer should consider the additional pressure due to hydraulic shock and should also consider the rate of pressure rise caused by hydraulic shock.

(b) The system shall be so designed that proper functioning of any unit shall not be affected by the back pressure in the system. The design shall be such that malfunctioning of any unit in the system will not render any other connected or emergency system inoperative because of back pressure.

(c) Pneumatic systems with a maximum allowable working pressure in excess of 150 pounds per square inch shall be designed with a surge tank or other acceptable means of pulsation dampening.

(d) Each pneumatic system must minimize the entry of oil into the sys-

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tem and must drain the system of liquids.

[CGFR 68-82, 33 FR 18878, Dec. 18, 1968, as amended by CGFR 69-127, 35 FR 9980, June 17, 1970; CGD 73-254, 40 FR 40168, Sept. 2, 1975; CGD 83-043, 60 FR 24781, May 10, 1995; CGD 95-027, 61 FR 26001, May 23, 1996]

§ 58.30-10 Hydraulic fluid.

(a) The requirements of this section are applicable to all fluid power transmission and control systems installed on vessels subject to inspection.

(b) The fluid used in hydraulic power transmission systems shall have a flashpoint of not less than 200 °F. for pressures below 150 pounds per square inch and 315 °F. for pressures 150 pounds per square inch and above, as determined by ASTM D 92 (incorporated by reference, see § 58.03-1), Cleveland "Open Cup" test method.

(c) The chemical and physical properties of the hydraulic fluid shall be suitable for use with any materials in the system or components thereof.

(d) The hydraulic fluid shall be suitable for operation of the hydraulic system through the entire temperature range to which it may be subjected in service.

(e) The recommendations of the system component manufacturers and ANSI B93.5 (incorporated by reference; see 46 CFR 58.03-1) shall be considered in the selection and use of hydraulic fluid.

[CGFR 68-82, 33 FR 18878, Dec. 18, 1968, as amended by CGFR 69-127, 35 FR 9980, June 17, 1970; USCG-1999-5151, 64 FR 67180, Dec. 1, 1999; USCG-2003-16630, 73 FR 65187, Oct. 31, 2008]

§ 58.30-15 Pipe, tubing, valves, fittings, pumps, and motors.

(a) The requirements of this section are applicable to those hydraulic and pneumatic systems listed in § 58.30-1.

(b) Materials used in the manufacture of tubing, pipes, valves, flanges, and fittings shall be selected from those specifications that appear in 46 CFR 56.60-1, Table 56.60-1(a) or 46 CFR 56.60-2, Table 56.60-2(a); or they may be selected from the material specifications of Section I or Section VIII of the ASME Boiler and Pressure Vessel Code (both incorporated by reference; see 46 CFR 58.03-1) if not prohibited by the section of this subchapter dealing with